Appl. No. 10/537,897

Atty. Ref.: 4982-5 Amendment

Monday, March 31, 2008

AMENDMENTS TO THE CLAIMS:

Please amend the claims as follows:

1. (Currently Amended) A method Method for increasing plant yield relative to a

corresponding wild type plant[[s]], comprising increasing modifying expression in a plant

of a nucleic acid sequence encoding a 2xC2H2 zinc finger protein and/or modifying in a

plant level and/or activity of a 2xC2H2 zinc finger protein, said 2xC2H2 zinc finger

protein comprising a motif having at least 80% identity to any one or more of the motifs

selected from the group consisting of :

(i) SEQ ID NO 5, wherein the Leu at position 3 may be any hydrophobic amino

acid;

(ii) SEQ ID NO 7 wherein Xaa at positions 1 and 5 is any hydrophobic residue

and Xaa at position 6 is optionally present and, when present, is any amino acid;

(iii) SEQ ID NO 8 wherein the Ser at position 3 is optionally present;

(iv) SEQ ID NO 9 wherein each Xaa is independently any amino acid; and

(v) a motif according to (i) to (iv) further containing at least one conserved amino

acid substitution; and

selecting a plant having increased yield as compared to a corresponding wild

type plant.

2. (Currently Amended) A method Method-for increasing leaf surface area

relative to a corresponding wild type plant[[s]], comprising increasing modifying

expression in a plant of a nucleic acid sequence encoding a 2xC2H2 zinc finger protein,

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said 2xC2H2 zinc finger protein comprising a motif having at least 80% identity to any one or more of the motifs selected from the group consisting of :

(i) SEQ ID NO 5, wherein the Leu at position 3 may be any hydrophobic amino acid;

(ii) SEQ ID NO 7 wherein Xaa at positions 1 and 5 is any hydrophobic residue and Xaa at position 6 is optionally present and, when present, is any amino acid;

(iii) SEQ ID NO 8 wherein the Ser at position 3 is optionally present;

(iv) SEQ ID NO 9 wherein each Xaa is independently any amino acid; and

(v) a motif according to (i) to (iv) further containing at least one conserved amino acid substitution and/or modifying in a plant level and/or activity of a 2xC2H2 zinc finger protein.

- 3. (Currently Amended) <u>A method Method for prolonging vegetative growth</u> phase of a plant relative to <u>a corresponding wild type plant[[s]]</u>, comprising <u>increasing modifying expression</u> in a plant of a nucleic acid sequence encoding a 2xC2H2 zinc finger protein, said 2xC2H2 zinc finger protein comprising a motif having at least 80% identity to any one or more of the motifs selected from the group consisting of :
- (i) SEQ ID NO 5, wherein the Leu at position 3 may be any hydrophobic amino acid;
- (ii) SEQ ID NO 7 wherein Xaa at positions 1 and 5 is any hydrophobic residue and Xaa at position 6 is optionally present and, when present, is any amino acid;
 - (iii) SEQ ID NO 8 wherein the Ser at position 3 is optionally present;
 - (iv) SEQ ID NO 9 wherein each Xaa is independently any amino acid; and

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(v) a motif according to (i) to (iv) further containing at least one conserved amino

acid substitution and/or modifying in a plant level and/or activity of a 2xC2H2 zinc finger

protein.

4. (Currently Amended) A method Method according to claim 1, wherein said

modifying increasing expression, level and/or activity is effected by recombinant means

and/or chemical means.

Claim 5. (Canceled)

Claim 6. (Canceled)

Claim 7. (Canceled)

Claim 8. (Canceled)

Claim 9. (Canceled)

10. (Previously Presented) A method Method according to claim 1, wherein

said 2xC2H2 zinc finger protein is derived from a dicotyledonous plant 2xC2H2 zinc

finger protein, preferably from the family Brassicaceae, further preferably from

Arabidopsis thaliana, more preferably the nucleic acid is as represented by SEQ ID NO

2 or a homologue, derivative or active fragment thereof and/or wherein said nucleic acid

is as represented by SED ID NO 1 or a portion thereof or sequences capable of

hybridising therewith.

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11. (Currently Amended) A method Method according to claim [[10]]46, wherein

said homologue, derivative or active fragment has, in increasing order of preference, at

least 30%, 31%, 32%, 33%, 34%, 35%, 36%, 37%, 38%, 39%, 40%, 41%, 42%, 43%,

44%, 45%, 46%, 47%, 48%, 49%, 50%, 52%, 54%, 56%, 58%, 60%, 62%, 64%, 66%,

68%, 70%, 72%, 74%, 76%, 78%, 80%, 82%, 84%, 86%, 88%, 90%, 92%, 94%, 96%,

98%-sequence identity with the sequence of SEQ ID NO 2.

12. (Currently Amended) A method Method according to claim 1, wherein said

plant is a monocot.

13. (Currently Amended) A method Method according to claim 1, wherein said

increasing modifying expression is effected by introducing into [[a]]the plant a nucleic

acid capable of increasing modifying expression of a gene encoding [[a]]said 2xC2H2

zinc finger protein and/or capable of modifying level and/or activity of a 2xC2H2 zinc

finger protein.

14. (Currently Amended) A method Method according to claim 13, wherein said

nucleic acid capable of increasing modifying expression is a nucleic acid encoding

[[a]]said 2xC2H2 protein, such as a 2xC2H2 protein.

15. (Currently Amended) A method Method-according to claim 13, wherein said

nucleic acid introduced into [[a]]the plant is an alternative splice variant of the of [[a]]the

nucleic acid encoding a 2xC2H2 zinc finger protein.

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16. (Currently Amended) A method Method according to claim 13, wherein said

nucleic acid introduced into [[a]]the plant is an allelic variant of the of [[a]]the nucleic

acid encoding a 2xC2H2 zinc finger protein.

17. (Currently Amended) A method Method according to claim 13, wherein said

nucleic acid introduced into [[a]]the plant is comprised on at least part of a

chromosome.

Claim 18. (Canceled)

19. (Currently Amended) A method Method according to claim 1, wherein

expression of said nucleic acid is driven by a plant promoter, preferably a constitutive

promoter, such as a GOS2 promoter.

20. (Currently Amended) A method Method-according to claim [[1]]19, wherein

the expression of said nucleic acid is driven by a plant promoter, preferably is a tissue

preferred promoter, such as seed-preferred promoter.

21. (Currently Amended) A method Method according to claim 1, wherein said

increased yield comprises increased above ground biomass.

22. (Currently Amended) A method Method according to claim 1, wherein said

increased yield comprises increased seed yield.

23. (Currently Amended) A method Method-according to claim 1, wherein said

increased yield comprises increased root yield.

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Claim 24. (Canceled)

Claim 25. (Canceled)

Claim 26. (Canceled)

Claim 27. (Canceled)

Claim 28. (Canceled)

- 29. (Currently Amended) <u>A method Method for the production of a transgenic</u> plant having increased yield, increased leaf surface area and/or prolonged vegetative growth, which method comprises
- (i) introducing into a plant or plant cell <u>a nucleic acid sequence encoding a</u>

 2xC2H2 zinc finger protein, said 2xC2H2 zinc finger protein comprising a motif having at least 80% identity to any one or more of the motifs selected from the group consisting of :
- (a) SEQ ID NO 5, wherein the Leu at position 3 may be any hydrophobic amino acid;
- (b) SEQ ID NO 7 wherein Xaa at positions 1 and 5 is any hydrophobic residue and Xaa at position 6 is optionally present and, when present, is any amino acid;
 - (c) SEQ ID NO 8 wherein the Ser at position 3 is optionally present;
 - (d) SEQ ID NO 9 wherein each Xaa is independently any amino acid; and

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(e) a motif according to (a) to (d) further containing at least one conserved amino

acid substitutiona 2xC2H2 zinc finger nucleic acid;

(ii) Cultivating the plant or plant cell under conditions promoting plant growth;

<u>and</u>

(iii) selecting for plants having increased yield.

30. (Currently Amended) A plant Plant obtainable by a method according to

claim 1, or a harvestable part of said plant or a propagule of said plant or a progeny of

said plant, which plant, part, propagule or progeny has increased yield, modified leaf

surface area and/or prolonged vegetative growth, relative to a corresponding wild type

plant[[s]], part, propagule or progeny.

31. (Currently Amended) A transgenic Transgenic plant having increased yield,

increased leaf surface area and/or prolonged vegetative growth, which transgenic plant

has modified expression of a nucleic acid encoding a 2xC2H2 zinc finger protein relative

to corresponding wild type plants, said 2xC2H2 zinc finger protein comprising a motif

having at least 80% identity to any one or more of the motifs selected from the group

consisting of:

(i) SEQ ID NO 5, the Leu at position 3 may be any hydrophobic amino acid;

(ii) SEQ ID NO 7 wherein Xaa at positions 1 and 5 is any hydrophobic residue

and Xaa at position 6 is optionally present and, when present, is any amino acid;

(iii) SEQ ID NO 8 wherein the Ser at position 3 is optionally present;

(iv) SEQ ID NO 9 wherein each Xaa is independently any amino acid; and

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(v) a motif according to (i) to (iv) further containing at least one conserved amino

acid substitution and/or modified level and/or activity of a 2xC2H2 zinc finger protein,

relative to corresponding wild type plants.

32. (Currently Amended) A plant Plant part, preferably a harvestable part, a

propagule or progeny of a plant as defined in claim 30, which progeny has modified

expression of [[a]]the nucleic acid encoding 2xC2H2 zinc finger protein-and/or modified

level and/or activity of a 2xC2H2 zinc finger protein, relative to corresponding wild type

plants.

33. (Currently Amended) A plant Plant or plant part according to claim 30,

which plant is a monocotyledonous plant, preferably a cereal.

34. (Currently Amended) A plant Plant or plant part according to claim 30

selected from rice, maize, wheat, barley, millet, oats, rye, sorghum, soybean, sunflower,

canola, sugarcane, alfalfa, leguminosae (bean, pea), flax, lupinus, rapeseed, tobacco,

tomato, potato, squash, papaya, poplar and cotton.

Claims 35-42. (Canceled)

43. (new) The method of claim 1 wherein Gln at position 1 of SEQ ID NO:5 of (i)

is Gly, Lys or Arg, or Ala at position 2 of SEQ ID NO:5 of (i) is Ser, or Leu at position 3

of SEQ ID NO:5 of (i) is Phe.

44. (new) The method of claim 10 wherein said dicotyledonous plant is from the

family Brassicaceae

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45. (new) The method of claim 10 wherein said dicotyledonous plant is

Arabidopsis thaliana.

46. (new) The method of claim 10 wherein said 2xC2H2 zinc finger protein is

SEQ ID NO:2 or a homologue, derivative or active fragment thereof.

47. (new) The method of claim 10 wherein said 2xC2H2 zinc finger protein is a

protein encoded by SED ID NO:1 or a portion of SEQ ID NO:1 or said protein is

encoded by a nucleic acid sequences capable of completely hybridizing with SEQ ID

NO:1.

48. (new) The method according to claim 46, wherein said homologue, derivative

or active fragment has at least 94% sequence identity with the sequence of SEQ ID NO

2.

49. (new) The method according to claim 19, wherein the plant promoter is a

constitutive promoter.

50. (new) The method of claim 49, wherein the promoter is a GOS2 promoter.

51. (new) The method according to claim 20, wherein the tissue preferred

promoter is a seed-preferred promoter.

52. (new) A plant or plant part according to claim 33, which plant is a cereal.

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